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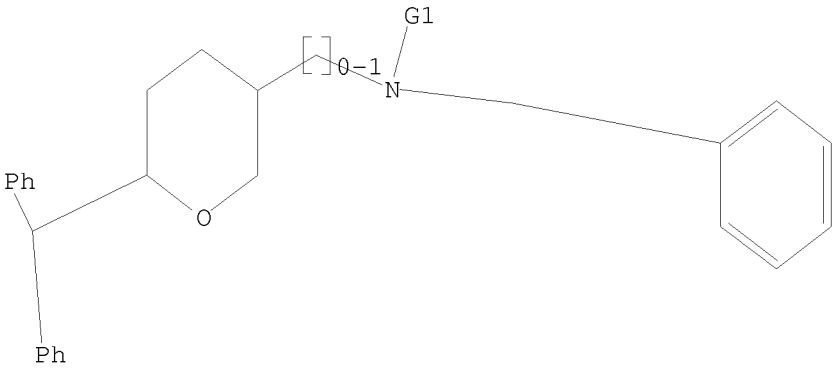

G1 H,Me,n-Pr,n-Bu

Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2 TO 124
PROJECTED ANSWERS: 2 TO 124

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L2 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2010 ACS on STN
RN 869114-04-5 REGISTRY
ED Entered STN: 01 Dec 2005
CN D-arabino-Hexitol, 1,5-anhydro-2,4,6-trideoxy-2-[[(4-methoxyphenyl)methyl]amino]-6,6-diphenyl-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H29 N O3 . C2 H2 O4
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

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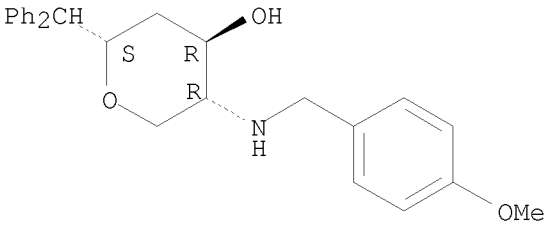
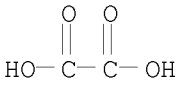
CRN 862647-22-1
CMF C26 H29 N O3

Absolute stereochemistry. Rotation (-).



CM 2

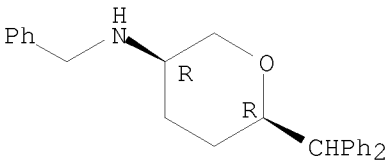
CRN 144-62-7
CMF C2 H2 O4



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2010 ACS on STN
RN 805251-49-4 REGISTRY
ED Entered STN: 30 Dec 2004
CN 2H-Pyran-3-amine, 6-(diphenylmethyl)tetrahydro-N-(phenylmethyl)-, (3R,6R)-rel- (CA INDEX NAME)
FS STEREOSEARCH
MF C25 H27 N O
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Relative stereochemistry.



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4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	4.69	4.91

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 23 Feb 2010 VOL 152 ISS 9
FILE LAST UPDATED: 22 Feb 2010 (20100222/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2009.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

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L3           4 L2

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L3 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2008:825727 CAPLUS
DN 149:152940
TI Preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivatives as monoamine reuptake inhibitors for treating depression
IN Dutta, Aloke K.
PA Wayne State University, USA
SO U.S. Pat. Appl. Publ., 54pp., Cont.-in-part of U.S. Ser. No. 330,972.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 6

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PI	US 20080167478	A1	20080710	US 2008-50040	20080317
	US 20030225133	A1	20031204	US 2003-311796	20030328
	US 6995268	B2	20060207		
	WO 2005105075	A1	20051110	WO 2005-US12748	20050415

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

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PRAI	US 2003-311796	A2	20030328		
	US 2004-563189P	P	20040416		
	WO 2005-US12748	A2	20050415		
	US 2006-330972	A2	20060112		
	US 2000-212921P	P	20000620		
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 149:152940

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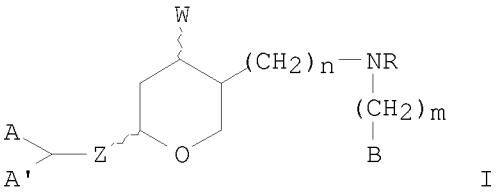


I

AB Novel 3,6-disubstituted pyrans (I, A, A', and B = optionally substituted C4-C14 aryl and heteroaryl wherein heteroatoms of heteroaryl A and/or A' are selected from the group consisting of O, N, and S; Z = a chemical bond and Y-(CH2)o wherein Y = NH or O and o = 0-4; R = H or C1-8 alkyl; W = H or OH; and n and m = 0-4, and wherein any carbon of -(CH2)n may be substituted by OR4 wherein R4 = C1-8 alkyl, C2-18 alkylene, or COOR5 wherein R5 = C1-8 alkyl or C2-18 alkylene) or a pharmaceutically acceptable derivative or salt, are monoamine reuptake inhibitors with activity profiles of antidepressants. The synthesis of the pyrans is exemplified. For example, cis(6-benzhydryltetrahydropyran-3-yl)(2-indolemethyl)amine (II) was prepared by reacting trans-5-amino-2-diphenylmethyltetrahydropyran with 2-indolecarboxaldehyde followed by reduction with NaCNBH3. The affinity of II in binding to rat dopamine transporter, serotonin transporter, and norepinephrine transporter was assessed by measuring inhibition of binding of (3H)WIN 35,428, (3H)citalopram, and (3H)nisoxetine, resp.; II had IC50's of 227, 1640, and 401 nM, resp.

IT 805251-49-4P 869114-04-5P

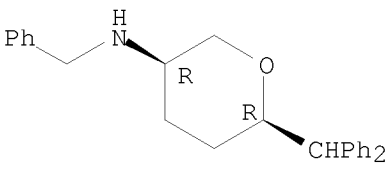
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivs. as monoamine reuptake inhibitors for treating depression)

RN 805251-49-4 CAPLUS

CN 2H-Pyran-3-amine, 6-(diphenylmethyl)tetrahydro-N-(phenylmethyl)-, (3R,6R)-rel- (CA INDEX NAME)

Relative stereochemistry.

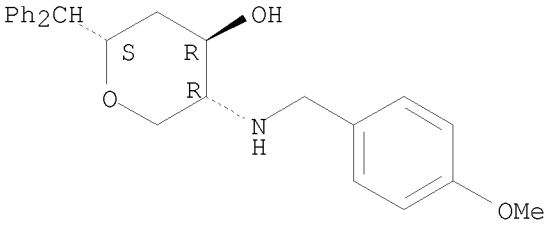


RN 869114-04-5 CAPLUS
CN D-arabino-Hexitol, 1,5-anhydro-2,4,6-trideoxy-2-[[(4-methoxyphenyl)methyl]amino]-6,6-diphenyl-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 862647-22-1
CMF C26 H29 N O3

Absolute stereochemistry. Rotation (-).



CM 2

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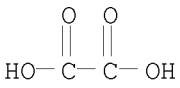
CMF C2 H2 O4



L3 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2006:544664 CAPLUS
DN 145:27854
TI Preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivatives as monoamine reuptake inhibitors for treating depression
IN Dutta, Aloke K.
PA USA
SO U.S. Pat. Appl. Publ., 57 pp., Cont.-in-part of U.S. Ser. No. 311,796.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20060122263	A1	20060608	US 2006-330972	20060112
US 20030225133	A1	20031204	US 2003-311796	20030328
US 6995268	B2	20060207		
WO 2005105075	A1	20051110	WO 2005-US12748	20050415

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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CA	2637045	A1	20070719	CA 2007-2637045	20070112
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US	2000-212921P	P	20000620		
WO	2001-US40964	W	20010614		
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 145:27854

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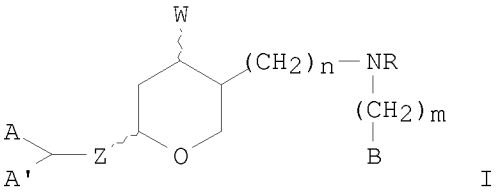


I

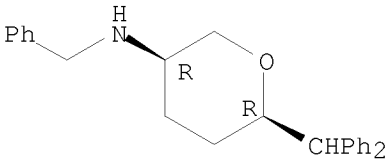
AB Novel 3,6-disubstituted pyrans (I, wherein A and A' = optionally substituted C4-C14 aryl and heteroaryl; Z = a chemical bond and Y-(CH2)o wherein Y = NH or O and o = 0-4; R = H, C1-8 alkyl, C2-8 alkenyl, or C2-8 alkynyl; W = H or OH; B= (un)substituted C4-C14 aryl and C4-C14 heteroaryl; and n and m = 0-4, and wherein any carbon of -(CH2)n may be substituted by OR4 wherein R4 = C1-8 alkyl, C2-18 alkylene, or COOR5 wherein R5 = C1-8 alkyl or C2-18 alkylene) or a pharmaceutically acceptable derivative or salt, are monoamine reuptake inhibitors with activity profiles of antidepressants. The synthesis of the pyrans is exemplified. For example, cis(6-benzhydryltetrahydropyran-3-yl)(2-indolemethyl)amine (II) was prepared by reacting trans-5-amino-2-diphenylmethyltetrahydropyran with 2-indolecarboxaldehyde followed by reduction with NaCNBH3. The affinity of II in binding to rat dopamine transporter, serotonin transporter, and norepinephrine transporter was assessed by measuring inhibition of binding

of (3H)WIN 35,428, (3H)citalopram, and (3H)nisoxetine, resp.; II had IC50's of 227, 1640, and 401 nM, resp.

IT 805251-49-4P 869114-04-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivs. as monoamine reuptake inhibitors for treating depression)

RN 805251-49-4 CAPLUS
CN 2H-Pyran-3-amine, 6-(diphenylmethyl)tetrahydro-N-(phenylmethyl)-, (3R,6R)-rel- (CA INDEX NAME)

Relative stereochemistry.

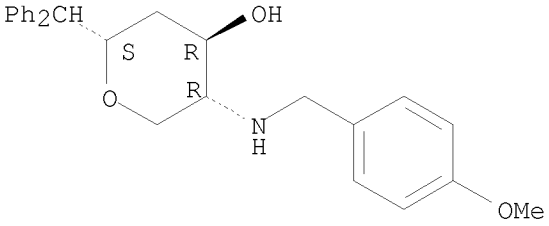


RN 869114-04-5 CAPLUS
CN D-arabino-Hexitol, 1,5-anhydro-2,4,6-trideoxy-2-[[(4-methoxyphenyl)methyl]amino]-6,6-diphenyl-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 862647-22-1
CMF C26 H29 N O3

Absolute stereochemistry. Rotation (-).



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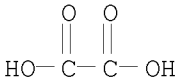

L3 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2005:1195739 CAPLUS
DN 143:460030

TI Preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivatives as monoamine reuptake inhibitors for treating depression

IN Dutta, Aloke K.
PA Wayne State University, USA

SO PCT Int. Appl., 112 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005105075	A1	20051110	WO 2005-US12748	20050415
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US 20070276005	A1	20071129	US 2006-599892	20061012
US 20080167478	A1	20080710	US 2008-50040	20080317
PRAI US 2004-563189P	P	20040416		
US 2003-311796	A2	20030328		
WO 2005-US12748	W	20050415		
US 2006-330972	A2	20060112		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 143:460030; MARPAT 143:460030

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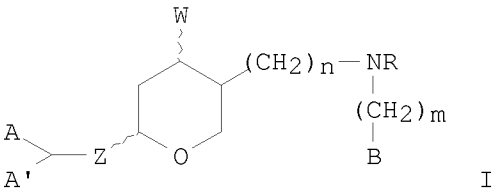


I

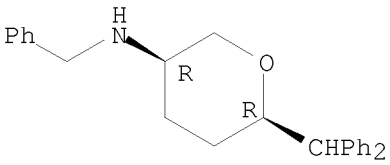
AB Novel 3,6-disubstituted pyrans (I, A, A', and B = optionally substituted C4-C14 aryl and heteroaryl wherein heteroatoms of heteroaryl A and/or A' are selected from the group consisting of O, N, and S; Z = a chemical bond and Y-(CH2)o wherein Y = NH or O and o = 0-4; R = H or C1-8 alkyl; W = H or OH; and n and m = 0-4, and wherein any carbon of -(CH2)n may be substituted by OR4 wherein R4 = C1-8 alkyl, C2-18 alkylene, or COOR5 wherein R5 = C1-8 alkyl or C2-18 alkylene) or a pharmaceutically

acceptable derivative or salt, are monoamine reuptake inhibitors with activity profiles of antidepressants. The synthesis of the pyrans is exemplified. For example, cis(6-benzhydryltetrahydropyran-3-yl)(2-indolemethyl)amine (II) was prepared by reacting trans-5-amino-2-diphenylmethyltetrahydropyran with 2-indolecarboxaldehyde followed by reduction with NaCNBH3. The affinity of II in binding to rat dopamine transporter, serotonin transporter, and norepinephrine transporter was assessed by measuring inhibition of binding of (3H)WIN 35,428, (3H)citalopram, and (3H)nisoxetine, resp.; II had IC50's of 227, 1640, and 401 nM, resp.

IT 805251-49-4P 869114-04-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of trisubstituted benzhydryl-benzylamino-pyranols and 3,6-disubstituted pyran derivs. as monoamine reuptake inhibitors for treating depression)

RN 805251-49-4 CAPLUS
CN 2H-Pyran-3-amine, 6-(diphenylmethyl)tetrahydro-N-(phenylmethyl)-, (3R,6R)-rel- (CA INDEX NAME)

Relative stereochemistry.

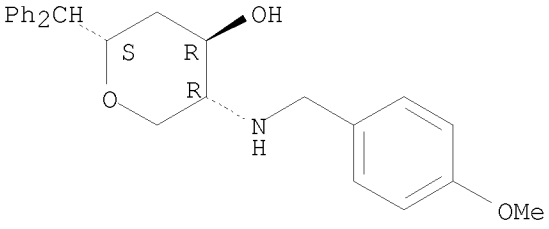


RN 869114-04-5 CAPLUS
CN D-arabino-Hexitol, 1,5-anhydro-2,4,6-trideoxy-2-[[(4-methoxyphenyl)methyl]amino]-6,6-diphenyl-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 862647-22-1
CMF C26 H29 N O3

Absolute stereochemistry. Rotation (-).



CM 2

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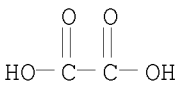
CMF C2 H2 O4



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2004:916847 CAPLUS
DN 142:32455
TI Structural requirements for 2,4- and 3,6-disubstituted pyran biomimetics of cis-(6-benzhydryl-piperidin-3-yl)-benzylamine compounds to interact with monoamine transporters
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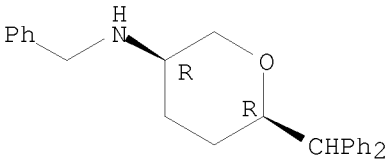
AB In our effort to delineate novel pharmacophoric configuration of bioisosteric pyran versions of cis-(6-benzhydryl-piperidin-3-yl)-benzylamine derivs. in interacting with the monoamine transporter, further structure-activity relationship study was carried out. Both cis and trans 2,4- and 3,6-disubstituted derivs. were synthesized to determine the positional importance of N-substitution on affinity for monoamine transporters, that is the dopamine transporter (DAT), the serotonin transporter (SERT), and the norepinephrine transporter (NET) in rat brain. For that purpose, the potency of compds. was determined in competing for the binding of [3H]WIN 35,428, [3H]citalopram, and [3H]nisoxetine, resp. Selected compds. were also evaluated for their activity in inhibiting the uptake of [3H]DA by DAT. Our binding results demonstrated potency in 3,6-disubstituted derivs. while 2,4-disubstituted derivs. failed to exhibit any appreciable binding affinity. Further structural exploration of the exocyclic N-atom in 3,6-disubstituted derivs. produced compds. potent at both DAT and NET.
IT 805251-49-4P
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(structural requirements for 2,4- and 3,6-disubstituted pyran biomimetics of cis-(6-benzhydryl-piperidin-3-yl)-benzylamine compds. to interact with monoamine transporters)
RN 805251-49-4 CAPLUS
CN 2H-Pyran-3-amine, 6-(diphenylmethyl)tetrahydro-N-(phenylmethyl)-, (3R,6R)-rel- (CA INDEX NAME)

Relative stereochemistry.



OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT